

# PATENT Docket No. 203PR07071-US-CIP2

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of:

Larry F. Rhodes et al.

Art Unit No.: 1713

Serial No.:

10/614,502

Examiner:

Filed:

July 7, 2003

Date: April 7, 2004

For:

PHOTO-IMAGEABLE COMPOSITIONS OF NORBORNENE AND

ACRYLATE COPOLYMERS AND USE THEREOF

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

### **CERTIFICATE OF MAILING**

Sir:

The undersigned hereby certifies that the attached INFORMATION DISCLOSURE STATEMENT, FORM PTO-1449, AND SIX (6) REFERENCES were mailed to the Commissioner for Patents, Alexandria, VA 22313-1450, with sufficient first-class postage, no special handling, on April 7, 2004, before 5:00 PM, thereby ensuring that such document(s) will be in the hands of the U.S. Postal Service by the close of business this day.

Respectfully submitted,

HUDAK SHUNK & FARINE CO., L.P.A.

By:

ovce M. Spencer

2020 Front St., Suite 307 Cuyahoga Falls, OH 44221 330-535-2220

Attorney Docket No. 203PR07071-US-CIP2

Rractitioner's Docket No. 203PR07071-US-CIP2

**PATENT** 

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

e application of:

Larry F. Rhodes et al.

Group No.: 1713

Application No.:

10/614,502

Examiner:

Filed:

July 7, 2003

Date: April 7, 2004

For:

PHOTO-IMAGEABLE COMPOSITIONS OF NORBORNENE AND ACRYLATE

COPOLYMERS AND USE THEREOF

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

Sir:

This invention relates generally to photo-imageable compositions encompassing copolymers prepared from norbornene-type and acrylate-type monomers, and more specifically, to the use of such photo-imageable copolymers in providing pattern transfer to an underlying layer(s).

As authorized and encouraged under 37 C.F.R. §1.97-1.99, applicant hereby cites as a means of complying with the duty of disclosure set forth in 37 C.F.R. §1.56, the following patents and/or documents, which the Examiner should consider with respect to the above-identified U.S. patent application:

	U.S. DOCUMENTS						
PATENT/DOCUMENT NO.	DATE	INVENTOR(S)					
3,697,490	October 10, 1972	Starmer					
4,849,488	July 18, 1989	Starzewski et al.					
6,034,259	. March 7, 2000	Brookhart et al.					
6,057,466	May 2, 2000	Starzewski et al.					
FOREIGN DOCUMENTS							
DOCUMENT NO.	JMENT NO. DATE						
0 837 079	April 22, 1998	EP					
04063810 (with translation)	February 28, 1992	JP					
	PUBLICATIONS						
"Block Copolymers by Transforma Polymerization into Controlled/"Li Hyun-jong Paik, K. Matyjaszewski Chapter 30, pages 6513-6516.	ving" Atom Transfer Radical Pol	ymerization", S. Coca,					
"Mechanistic Studies of the Palladi Olefins with Methyl Acrylate", S. N Chemical Society Publication, 1998	Mecking, L. Johnson, L. Wang, M						
"New Catalysts for the Polymerizat Ayusman Sen, <i>Polymeric Material</i>							
"Neutral Palladium Complexes as G A Cautionary Tale", G. Tian, H. Bo Macromolecules, 2001, Chapter 34	oone, B. Novak, <i>American Chemi</i>						

As this application was filed after June 30, 2003, only copies of the foreign documents and publications are included for the express purpose of providing the Patent and Trademark Office with an ample opportunity to evaluate the same and to arrive at an independent assessment of their materiality, if any, with regard to the examination of the application.

In reviewing the enclosed copies of the above publications, the Examiner is requested to ignore any underscoring or highlighting which may appear because such markings may or may not

have any relationship to the subject matter of the above-identified application. The copies being submitted with this Information Disclosure Statement are the best copies available at this time.

An examination of the present application considering the above documents is requested.

The Commissioner is hereby authorized to charge any fees that might be required or credit any overpayment of fees with regard to this document to Account No. 08-3150.

Respectfully submitted,

HUDAK SHUNK & FARINE CO., L.P.A.

Nestor W. Shust Reg. No. 23,034

2020 Front St., Suite 307 Cuyahoga Falls, OH 44221 330-535-2220

Attorney Docket No. 203PR07071-US-CIP2



Sheet 1 of 2

Form PTO-1449 U.S. Department of Commerce
Patent and Trademark Office
LIST OF PRIOR ART CITED BY APPLICANT
(Use several sheets if necessary)

Atty. Docket No.:
203PR07071-US-CIP2
Applicant:
Larry F. Rhodes et al.
Filing Date: 07/07/2003
Group: 1713

			LLC DATENIT	POCLIMENTS	Gloup: 1713			
*Examiner			U.S. PATENT I	DOCUMENTS		т	Filing date	
Initial		Document Number	Date	Name	Class	Subclass	if appropriat	
	AA	3,697,490	Oct. 10, 1972	Starmer				
	AB	4,849,488	July 18, 1989	Starzewski et al.				
	AC .	6,034,259	March, 7, 2000	Brookhart et al.		•		
	AD.	6,057,466	May 2, 2000	Starzewski et al.				
	AE	·						
	AF							
	AG							
	AH		*			,		
	AI							
	AJ							
•	AK							
			FOREIGN PATEN	T DOCUMENTS			."	
		Document Number	Date	Country	Class	Subclass	Translation Yes No	
	AL.	0 837 079	April 22, 1998	EP			X X	
	AM	04063810	Feb. 28, 1992	JP				
	AN							
	AO		-					
	AP		<u> </u>					
		OTHER PRIOR	ART (Including Auth	or, Title, Date, Pertinent Pages, Etc.)				
	AR	"Block Copolymers by Transformation of Living Ring-Opening Metathesis Polymerization into Controlled/"Living" Ator Transfer Radical Polymerization", S. Coca, Hyun-jong Paik, K. Matyjaszewski, <i>American Chemical Society</i> , <i>Macromolecules</i> , 1997, Chapter 30, pages 6513-6516.						
	AS	"Mechanistic Studies of the Palladium-Catalyzed Copolymerization of Ethylene and α-Olefins with Methyl Acrylate", S. Mecking, L. Johnson, L. Wang, M. Brookhart, <i>American Chemical Society</i> Publication, 1998, Chapter 120, pages 888-899.						
EXAMINER		DATE CO	ONSIDERED					

#### **EXAMINER**

#### DATE CONSIDERED

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Sheet 2 of 2										
Paten	ommerce k Office		Atty. Docket No.: Serial No.: 203PR07071-US-CIP2 10/614,502							
LIST OF PRIOR ART CITED BY APPLICANT (Use several sheets if necessary)				Applicant: Larry F. Rhodes et al.						
					Filing Date:		Group: 171,3			
				U.S. PATENT DO	DCUMENTS			<u> </u>		
*Examiner	Т	1	<u> </u>		T		T	T	Filing date	
Initial		1	Document Number	Date		Name	Class	Subclass	if appropriate	
	AA	_				·				
	AB									
	AC									
	AD					•				
	AE	$oldsymbol{\perp}$								
	AF									
	AG	$\perp$			(6)					
	AH									
	AI								'	
·	ĀJ									
	AK									
				FOREIGN PATENT	DOCUMENTS					
	Document Number		ocument Number	Date	Country		Class	Subclass	Translation Yes No	
	AL	i								
	AM									
	AN						·	•		
	AO									
	AP		×							
			OTHER PRIOR	ART (Including Autho	r, Title, Date, Pert	tinent Pages, Etc.)				
				the Polymerization and		n of Functional Olefi	ns", Ayusınan	Sen, Polymeric	Materials:	
	AR		Science & Enginee	ering, 2001, 84, page 32	l <b>.</b>					
			"Neutral Palladium Complexes as Catalysts for Olefin-Methyl Acrylate Copolymerization: A Cautionary Tale", G.							
7	AS		"Neutral Palladium Complexes as Catalysts for Olefin-Methyl Acrylate Copolymerization: A Cautionary Tale", G. Tian, H. Boone, B. Novak, <i>American Chemical Society, Macromolecules</i> , 2001, Chapter 34, pages 7656-7663.							
EXAMINER	DATE CONSIDERED									
									•	
*EXAMINER: Initial if re conformance and not consi						9; Draw line through	citation if no	: in		